



CHANNEL ISLANDS NATIONAL PARK



INTERNET INFORMATION CENTER



The Pacific Ranger

With the designation of Channel Islands National Park in 1980 came the recognized need to monitor the parks marine resources, supply park operations and transport personnel to the islands which range up to 60 miles offshore. To meet these needs a new vessel was constructed for Channel Islands National Park. Launched in 1981, the "*Pacific Ranger*" has since logged over 24,000 operational hours while meeting those needs. The vessel regularly serves as the park research platform while monitoring the marine resources. More diving activity occurs off the Pacific Ranger each year than the rest of the National Park Service combined.

Greening the Pacific Ranger

During the past 20 years the Pacific Ranger has consumed over 185,000 gallons of diesel fuel. To reduce the environmental impact of this operation several changes are underway or have been accomplished-

Lubricating Oils- Only re-refined oil is utilized on the boat, this oil reduces the need to exploit new oil resources. Additionally the oil filter system on the boat, a "Purafiner" system super cleans the engine oil while removing contaminants which reduced oil change cycles by 78%.

Electrical Generation- Battery storage and a 110/220 volt inverter provide cabin electrical service which has reduced generator run time by 65%.

Bulbous Bow- In June 1999 hull modifications to the Pacific Ranger were performed. The installation of a "Bulbous Bow" reduces friction and wake resistance on the displacement hull as it travels through the water. This increased efficiency allows the vessel to travel farther while operating at the same engine RPM and fuel consumption. Thus far, the fuel savings have averaged 18%. This increase in efficiency has resulted in less fuel being consumed per trip and has corresponded in reduced exhaust emissions. This project was accomplished through a grant from the Ventura County Air Resource Board (50%) and funding from the NPS Green Energy Program. The \$18,000. cost of the hull modifications will be recovered through fuel savings in under 6 years.



Biodiesel- For the next two years the Pacific Ranger will operate on 100% Biodiesel. This renewable organic based fuel is manufactured from used vegetable cooking oils. This "*Green Energy*" project will reduce the demand on petroleum resources, decrease exhaust emissions and demonstrate the viable application of alternative fuels applications in marine service.

SPECIFICATIONS

Hull: Length 56 foot Overall, Width 16 Foot, Draft 4 feet, 10 inches, Steel, Monk Design.

Capacity: 24 Passengers, 20 Long Tons Cargo, Main Deck 12 Feet X 16 Feet.

Mechanical: 2 each GM 6-53 Engines, 1 each 15kW Generator, 1 each dive compressor, 12 Foot/15 hp Skiff.

Crusing Speed 11 Knots @ 12 Gallons per hour, Maximum Speed 11.5 Knots.

Staterooms for eight, Full galley, Two heads.

The boats crew consists of Captain [Diane Brooks](#), a 100 Ton Licensed Ocean Operator who has operated the Pacific Ranger for 12 years and has a total of 19 years at sea in the Santa Barbara Channel.



The Pacific Ranger with Bulbous Bow



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<http://www.nps.gov/chis/pacranger.htm>

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